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RAW SEQUENCE LISTINGPATENT APPLICATION: **US/10/046,938**DATE: 02/28/2002

TIME: 10:24:52

Input Set : N:\Crf3\RULE60\10046938.raw.txt
Output Set: N:\CRF3\02282002\J046938.raw

1 ::110 · APPLICANT: MITTAL, SURESH K.

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GRAHAM, FRANK L.
      3
              PREVIC, LUDVIK
      .1
              BABIUK, LORNE A.
      5 - 120 - TITLE OF INVENTION: MAMMALIAN CELL LINES EXPRESSING BOVINE ADENOVIRUS FUNCTIONS
      6 <130 > FILE REFERENCE: 293102002102
      7 · 140 · CURRENT APPLICATION NUMBER: 10/046,938
      8 -: 141 - CURRENT FILING DATE: 2002-01-14
     10 <150 · PRIOR APPLICATION NUMBER: EARLIER APPLICATION NUMBER: 09/435,242
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     17 · 160 > NUMBER OF SEQ ID NOS: 34
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     22 <212> TYPE: DNA
     23 <213> ORGANISM: Bovine adenovirus type 3
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     30
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              egegegggge ggggegaggg geggagttee geaccegeta egteatttte agacattttt 240
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                    Met Lys Tyr Leu Val Leu Val Leu Asn Asp Gly Met Ser Arg Ile
     40
                                       5
                                                          10
                                                                               15
    41
                                                                                  698
              gaa aaa got oto ofg tgo ago gat ggt gag gtg gat tta gag tgt cat
     42
              Glu Lys Ala Leu Leu Cys Ser Asp Gly Glu Val Asp Leu Glu Cys His
    43
                                                    25
    44
              gag gta off occ get tot dec geg bot gto dec get tot gtg tea dec
                                                                                  746
    45
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    46
                           35
                                                40
                                                                    45
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47	gtg agg					_		_				-		-		794
4 d	Val Arg		Pro	Pro	Pro	Leu		Pro	Val	Phe	Pro		Ser	Pro	Pro	
49		50					55					60				
50	gee eeg															842
51	Ala Pro		Val	Ası	Pro		Ala	Ser	Ser	Leu		Gln	Gln	Tyr	Arg	
52	65					70					75					
5.3	aga gag						_		_	_	-	-				890
5.4	Arg Glu	Leu	Leu	Glu	-	Ser	Leu	Leu	Arg		Ala	Glu	GLY	Gln		
55	80				85					90					95	
56 	egt gea															938
57	Arg Ala	Val	Cys		Cys	Glu	Arg	Leu		Val	GLu	Glu	Asp		Cys	
58				100					105					110		
59	ctg aat															986
60	Leu Asn	Ala		Asn	Leu	Leu	Phe		Asp	Pro	Trp	Leu		Ala	Ala	
6 l.			115					120					125			7024
62	gaa aat															1034
6 }	Glu Asn		GTA	Asp	He	Phe		Ser	Pro	Ala	Met		Pro	Glu	Pro	
64		130					135					140				1000
65	tgg ata				-		-	_	-	-					-	1082
66 67	Trp Ile		Leu	Ser	ser		Asp	ser	Asp	val		GLU	val	Thr	Ser	
67	145					150					155					1120
68 50	cac ttt															1130
69 70	His Phe	Pne	Leu	Asp		Pro	GIU	Asp	Pro		Arg	GIII	Cys	Ser		
70	160				165					170					175	1170
71	tgt ggg															1178
7 <u>.</u> ; 7 3	Cys Gly	Phe	HIS		Ald	GIN	ser	GTÀ		Pro	GTÄ	rre	мет	-	ser	
7.3 7.4	*** ***	+	+ ~	180	~~~		+	~~+	185					190		1.30.4
7 1 7 5	ttg tgc								-			agta	lagta	aca		1224
76	Leu Cys	тут	195	Arg	GIII	1111	ıyı	200	Cys	116	1 À I					
77	ttctgta	222 (+ 0++	- 0 0+	· a a + +	+ a+ =		· a + + c	·+++	2000		a t	aaat	aasat	1 204
78	gatotta															
7 O > 79	gatteta	acc c	Jyyca	lcaac	o ac	iacac	acy		Caca						u Glu	1000
80										36	205		11 26	er Gr	u GIU	
81	gaa atg	tσac	it cat	at t	ract	ttac	ic ac	racaa	папс				cato	rttaa	ct	1395
82	Glu Met	cyuç	, coul	-پاد (-9 u C C	9 .	, o ge	.ycaa	igayy	uac	ccy cy	uy L	catt	, ccyo		1000
83	210															
84	ttggcgc	acc c	rtaco	at a a	ac tt	taaa	acaa	. +++	аааа	atc	actt	t: t: t t	at t	aato	ractat	1155
85	aaagtag															
86	getetat															
87	gacgcct															
88	ctctgcc															
89	acgtgtt															
90	ctctgct															
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93	ctaccag										-	-	-	-	_	
94	cagcact															
95	tgatgtt															
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Input Set : N:\Crf3\RULE60\10046938.raw.txt
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	2175
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9.7	gtatgagttg actoaacett tgaacataac atettgegee tatgtgeteg gaaatgggge 2235
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106	tgcagaegge agggttaege etttgggtte eeteeacatt gtgggeaace gttgtaggeg 2775
107	ttggccaacc atgcagggga atgtgtttat catgtctaaa ctgtatctgg gcaacagaat 2835
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109	ggcgacaaac aagctggtot tggottgtgo tittgagaat aatgtactgg tgtacaaagt 2955
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137 138	20 25 30
139	Val Leu Pro Pro Ser Pro Ala Pro Val Pro Ala Ser Val Ser Pro Val
140	35 40 45
141	Arg Ser Pro Pro Pro Leu Ser Pro Val Phe Pro Pro Ser Pro Pro Ala
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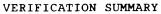
Input Set : N:\Crf3\RULE60\10046938.raw.txt Output Set: N:\CRF3\02282002\J046938.raw

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148	Ald V	var c	100 100	Cys	GIU	AIG	Leu	105	vai	13 L U	GIU	кър	110	Cys	Leu	
149	Asn A	Ala Va	al Asn	LOU	Γρυ	Dho	Dro		Dro	Trn	T AU	Aen		λla	chi	
150	ת מונה		15 ASII	Leu	Leu	rne	120	изр	FIU	пр	ьеи	125	AId	AIG	'JI'U	
151	Acn C		ly Asp	T10	Dho	Lvc		Dro	λlο	Mot	Cor		clu	Dro	Trn	
152		130	гу кэр	116	rne	135	ser	PIO	ALG	Met	140	PIO	GLU	PIO	пр	
153			eu Ser	cor	Tur		Car	Acn	Val	clu		Wa l	Thr	Car	uic	
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155		Dho I	eu Asp			Clu	A.an	Dro	Cor		Clu	Cuc	Cor	Cor		
156	PHE F	ane re	eu Asp	165	PIO	GIU	АЅР	PIO	170	Arg	GIU	Cys	261	175	Cys	
157	clo r	oho us	is Gln		Cln	cor	Clu	т10		(2) 11	Tlo	Mot	Cuc		Lou	
158	JIY F	rite n.	180	Ald	GIII	261	Gry	185	PIO	ату	116	мес	190	361	Leu	
159	CVC T	Dur Mo	et Arg	Cln	Thr	Tur	u; c		Tlo	Tirr	Cor	Dro		Cor	<i>(</i> 21.0	
160	Cys 1		95	GIII	1111	1 y 1	200	СУЗ	rre	тут	ser	205	vai	ser	GIU	
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173															gageg	
174															iggegg	
175															itttt	
176								_	_		_			_	eggat	
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179															caaga	
180															gtaga	
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182								_	_						agete	
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184															gtttc	
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188															ggcta	
189															.gacta	
190															gtttc	
191	-			-		-	-								aacct	
192															gtatt	
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194															aaatg	
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Leu Leu Asp Leu Lys Leu Leu Arg Ser Ile Val Ala Gly Ala Ser Asn 10		ctt	tta	aat	tta	220	ata	ctt	cac	tat	ato	-	aca	aaa	act	-	aat	1541
10			_			-			-						-			1341
202		11.50	БСА	пор		L, J	поч	шоч	1119		110	****	*****	3+1		D		
Arg Thr Gly Val Trp Lys Arg Arg Leu Trp Leu Gly Arg Leu Fhr Gln 204 25 30 30 30 30 30 30 30 3		cac	act.	aga		t.aa	аас	agg	caa		t.aa	ct.a	aga	cac		act	caa	1589
2014 25		-					-			_		_		-	_			
205		5		-			-1-	9	-		L		1					
Leu Val His Asp Thr Cys Val Glu Asn Glu Ser Ile Phe Leu Asn Ser		ctq	atc	cat	qat	acc	tge	gta	gag	aac	qaq	age	ata	ttt	ctc	aat	tct	1637
207																		
Leu Pro Gly Asn Glu Ala Phe Leu Arg Leu Leu Arg Ser Gly Tyr Phe	207				-		•											
210	208	ctg	cca	ggg	aat	gaa	gct	ttt	tta	agg	ttg	ctt	cgg	agc	ggc	tat	ttt	1685
gaa gtg ttt gac gtg ttt gtg gtg cct gag ctg cat ctg gac act ccg 1733 212 Glu Val Phe Asp Val Phe Val Val Pro Glu Leu His Leu Asp Thr Pro 213 75 80 85 214 ggt cga gtg gtc gcc gct ctt gct ctg ctg gtg ttc atc ctc aac gat 1781 215 Gly Arg Val Val Ala Ala Leu Ala Leu Leu Val Phe Ile Leu Asn Asp 216 90 100 217 tta gac gct aat tct gct tct tca ggc ttt gat tca ggt ttt ctc gtg 218 Leu Asp Ala Asn Ser Ala Ser Ser Gly Phe Asp Ser Gly Phe Leu Val 219 105 110 115 220 gac cgt ctc tgc gtq ccq cta tgg ctg aag gcc agg gcg ttc aaq atc 221 Asp Arg Leu Cys Val Pro Leu Trp Leu Lys Ala Arg Ala Phe Lys Ile 222 120 125 130 223 acc cag agc tcc agg agc act tcg cag cct tcc tgc tcg cag cat tcg cag cct tcc tgc tgq cag cag cat tcg cag cct tcc tgc gtq ccag cag agc act ccc gac aag 1925 224 Thr Gln Ser Ser Arg Ser Thr Ser Gln Pro Ser Ser Ser Pro Asp Lys 225 135 140 145 150 226 acg acc cag act acc agc cag tagacgggga cagcccaccc cgggctagcc 1976 227 Thr Thr Gln Thr Thr Ser Gln 228 155 230 atgactcaa taqatgccat gacgttttt atgagaggta cagtttgag gacataaaga 2096 231 gctacgaggc ttgaccagage agcactttt tagagaggta cagttttgag gacataaaga 2096 232 agcccdca taqatgccat gacgtttttt atgagaggta cagttttgag gacataaaga 2096 233 atgacttcaa taqatgccat gatgttttt atgagaggta cagttttgag gacataaaga 2096 234 tggaggagcat ggacatgggt ccgtgtgtaa caggaatgac tttgtgag gacataaaga 2276 235 atgagttgg aaatggggt ccgtgtgtaa caggaatgac ttggggtgact tttgtgaatt 2336 236 atgagtttga gacagagca accattataggg taccacctt gaacattaaca tcttgcgcc 2216 237 cttacattcg gggttgtgag tttgttggget gttacceggg aatctgttt acttgaagg 2276 238 gagatataa gggaggtag ttgttgtgget gttacceggg aatctgttet acttctaaca 2516 239 gggacateg ttttcaggg attgtagget gttacceggg aatctgttet acttctaaca 2516 239 ggacatac ggccqtggt tcgaacatttg acaaattagag gttaccetag tagtgttet acttctaaca 2516 239 ggacatac ggccqtggt ttgtagag tttgtggge gttaccegg aatctgttet acttctaaca 2516 239 ggacatac ggcgtggaa ttgtagaget ggacacttt ctgcgttat acttgtaagag 2276 230 gaagggtt ggaagaggac acaacaggca agcccccca ttgtgttet acttctaaca 2516 231 ggacacca tttcgggaa attgtggaacaca ttgc	209	Leu	Pro	Gly	Asn	Glu	Ala	Phe	Leu	Arg	Leu	Leu	Arg	Ser	Gly	Tyr	Phe	
Glu Val Phe Asp Val Phe Val Val Pro Glu Leu His Leu Asp Thr Pro 75 80 85 214 ggt cga gtg gtc gcc gct ctt gct ctg ctg gtg ttc atc ctc aac gat 215 Gly Arg Val Val Ala Ala Leu Ala Leu Leu Val Phe Ile Leu Asn Asp 216 90 95 100 217 tta gac gct aat tct gct tct tca ggc ttt gat ca ggt ttt ctc gtg 218 Leu Asp Ala Asn Ser Ala Ser Ser Gly Phe Asp Ser Gly Phe Leu Val 219 105 110 115 220 gac cgt ctc tgc gtg ccg cta tgg ctg aag gcc agg gcg ttc aag atc 221 Asp Arg Leu Cys Val Pro Leu Trp Leu Lys Ala Arg Ala Phe Lys Ile 222 120 125 130 223 acc cag agc tcc agg agc act tcg cag cct tcc tcg tcg ccc gac aag 1925 224 Thr Gln Ser Ser Arg Ser Thr Ser Gln Pro Ser Pro Asp Lys 225 135 140 145 150 226 acg acc cag act acc agc cag tagacggga cagcccaccc cgggctagcc 1976 227 Thr Thr Gln Thr Thr Ser Gln 228 155 229 tggaggaggc tgaacagagc agcactcgtt tcgagcacat cagttaccga gacgtggtg 2036 230 atgacttca tagatgcat gatgttttt atgaggagta cagttttgag gacataaaatc 2156 231 agctgctgc cgtgctgag gacattttg agcagctca agctattgag gacgataacac 2216 232 agctgtgcc cgtgctgag gacattagg taacaggga agccccccc ggttatagag 2276 233 atgtgctcg aaatgggct actattagg taacaggga agccccccc ggttatagag 2276 234 tgggagcat ggaaggca tcatattagg taacaggga agccccccc ggttatagag 2276 235 gtagtttga ggaaggca tcatattagg taacaggga accccccc ggttatagag 2276 236 tgtgttga gagaggca tctattatagg taacagga accccccc ggttatagag 2276 237 cttacattcg ggttgtgag ttttgtggct gttacccgg aacttttg aggagattea accacgtgc 2216 238 gagttttag ggaaggca ttttgtgggct ttttgtggacttt ttgtgagct ttttgtagat 2336 240 gagaggttt ggttaaaaac accacgtca agcccccat accacgtc accacgtc 2396 240 gagaggttt ggttaaaaac aacacagtca agcccccat tcgctggac accacactt accacgtc 2469 240 gagaggttt ggttaaaaac aacacagtca agcccccat tttgttgac accacactt 2576 241 gctttccat gataacttt, gcagacaca tgcaggag tttttaccat accacgtc 2469 242 tggcaaccq tttgtaggcg ttggccaaca tgcagggaa ttqtattct atgcaacac 2876 243 tggcaaccq tttgtaggcg tggccaaca tgcagggaa ttqtattct atgcaacac 2876 244 tggcaaccq tttttagggc ttggccaacca tgcagggaa ttqtttct accaagtcca 2876 245 tggca	210	55					60					65					70	
213	211	gaa	gtg	ttt	gac	gtg	ttt	gtg	gtg	cct	gag	ctg	cat	ctg	gac	act	ccg	1733
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DATE: 02/28/2002

PATENT APPLICATION: US/10/046,938

TIME: 10:24:53

Input Set : N:\Crf3\RULE60\10046938.raw.txt Output Set: N:\CRF3\02282002\J046938.raw

L:11 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD L:14 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD L:16 M:256 W: Invalid Numeric Header Field, Wrong Prior FILING DATE:YYYY-MM-DD

L:26 M:351 W: Sequence data Name/Key Feature Out-of-Range, SEQ ID#:1, CDS LOCATION: join

(606..1215, 1323..1345)

L:39 M:351 W: Sequence data Name/Key Feature Out-of-Range, SEQ ID#: 1, CDS LOCATION:0..606

L:79 M:361 W: Invalid Split Codon, Sequence data for SEQ ID#: 1

L:1961 M:220 C: Keyword misspelled or invalid format, <213> ORGANISM for SEQ ID#:30 L:1963 M:257 W: Feature value mis-spelled or invalid, $<\!221\!>$ Name/Key for SEQ ID#:30

 $L\!:\!1967$ M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30

L:1969 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30

L:1977 M:257 W: Feature value mis-spelled or invalid, <221> Name/Key for SEQ ID#:31

L:1981 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31